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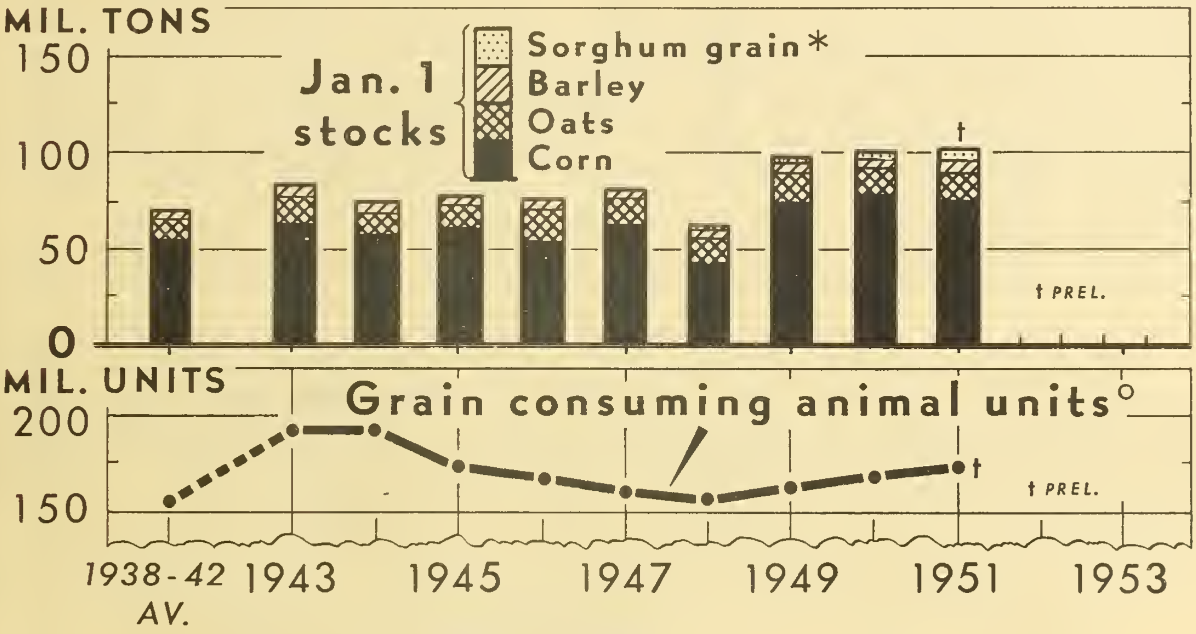
THE Feed SITUATION

BUREAU OF AGRICULTURAL ECONOMICS
UNITED STATES DEPARTMENT OF AGRICULTURE

FDS-123 BAE JAN. - FEB. 1951

FEED GRAIN STOCKS and LIVESTOCK UNITS



* NOT REPORTED PRIOR TO JAN. 1, 1948
° FED ANNUALLY DURING FEEDING YEAR BEGINNING PREVIOUS OCT. 1

U. S. DEPARTMENT OF AGRICULTURE NEG. 47996-XX BUREAU OF AGRICULTURAL ECONOMICS

Although stocks of corn in all positions on January 1, were a little smaller than a year earlier, stocks of oats, barley, and sorghum grain were all larger, resulting in a total tonnage of feed grains slightly larger than the big stocks of last year. The current strong demand for feed and expanding livestock production is expected to result in greater disappearance of feed grains during the remainder of 1950-51 than in the same period of 1949-50. Carry-over of feed grains into 1951-52 probably will be around a fourth smaller than the record carry-over of 31 million tons into 1950-51.

Table 1. - Statistical Summary

PRICES

Item	Unit	1948-49		1949-50		1950-51		
		Dec.	Jan.	Dec.	Jan.	Nov.	Dec.	Jan.
		Cents	Cents	Cents	Cents	Cents	Cents	Cents
Grains and Hay								
Corn, No. 3 Yellow, Chicago	Bushel	142.4	142.8	129.6	129.1	158.1	168.6	173.8
Price received by farmers, U. S.	Bushel	123.0	125.0	113.0	115.0	137.0	145.0	154.0
Oats, No. 2 White, Chicago 1/	Bushel	87.3	82.4	77.1	76.0	95.2	99.0	99.5
No. 2 White, Minneapolis 1/	Bushel	80.9	78.3	74.8	74.1	87.0	91.8	93.0
Price received by farmers, U. S.	Bushel	76.5	76.2	69.9	70.5	80.6	84.9	88.2
Barley, No. 3, Minneapolis	Bushel	134.6	137.5	141.8	144.4	147.6	151.2	161.7
Price received by farmers, U. S.	Bushel	113.0	115.0	109.0	110.0	114.0	119.0	127.0
Grain sorghums, price received by farmers, U. S.	100 pounds	219.0	222.0	179.0	189.0	177.0	188.0	210.0
Wheat, No. 2 Hard Winter, Kansas City	Bushel	228.7	225.0	222.1	222.3	222.4	234.6	240.2
		Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Hay, No. 1 Alfalfa, baled, Kansas City	Ton	30.00	30.00	31.00	29.10	29.50	30.70	31.25
Price received by farmers, baled, U. S.	Ton	23.80	24.70	21.90	21.90	21.20	21.80	22.60
Byproduct Feeds (bagged)								
Standard bran, Minneapolis	Ton	50.25	51.00	44.60	40.70	47.25	49.75	50.00
Buffalo	Ton	55.00	56.25	50.60	46.30	52.40	55.25	56.40
Price paid by farmers, U. S.	100 pounds	3.18	3.18	2.92	2.90	3.06	3.13	3.24
Standard middlings, Minneapolis	Ton	49.40	49.40	44.75	40.40	48.60	50.10	50.10
Buffalo	Ton	55.60	56.25	51.10	45.40	52.50	56.25	56.40
Price paid by farmers, U. S.	100 pounds	3.34	3.31	3.08	3.02	3.26	3.31	3.38
Cottonseed meal, 41 percent protein, Memphis	Ton	71.10	64.40	61.30	59.00	74.75	80.75	80.35
Linseed meal, 36 percent protein, Minneapolis 2/	Ton	83.00	83.40	73.10	69.30	63.10	65.40	69.60
28 percent protein, San Francisco	Ton	67.60	69.00	67.75	69.00	70.00	70.60	74.40
Soybean meal, 44 percent protein, Chicago 3/	Ton	78.00	73.45	68.80	66.00	73.35	76.40	77.20
Price paid by farmers, U. S.	100 pounds	4.64	4.43	4.32	4.20	4.24	4.34	4.51
Peanut meal, 45 percent protein, S. E. milling points	Ton	67.40	69.25	63.10	63.35	65.00	65.55	69.80
White hominy feed, Chicago	Ton	50.95	50.45	48.40	46.80	58.40	60.60	61.90
Gluten feed, 23 percent protein, Chicago	Ton	58.25	58.25	51.50	52.50	47.25	52.75	55.00
Tankage, digester, 60 percent protein, Chicago	Ton	125.20	125.50	119.75	117.00	120.10	123.25	124.50
Meat scraps, 50 percent protein, Chicago	Ton	110.30	111.50	105.40	105.00	116.75	117.60	119.55
Fish meal, 67 percent protein, San Francisco	Ton	164.15	170.00	189.30	179.90	131.80	133.60	144.70
Alfalfa meal, No. 1 fine, Kansas City	Ton	40.00	40.00	41.25	39.00	42.75	43.75	44.80
Mixed dairy feed, 16 percent protein, price paid by farmers, U. S.	100 pounds	3.79	3.76	3.41	3.42	3.69	3.81	3.97
Laying mash, price paid by farmers, U. S.	100 pounds	4.62	4.59	4.41	4.39	4.58	4.67	4.82
Scratch feed, price paid by farmers, U. S.	100 pounds	4.13	4.12	3.72	3.72	4.05	4.13	4.29

INDEX NUMBERS OF PRICES

		Percent	Percent	Percent	Percent	Percent	Percent	Percent
Feed grains, prices received by farmers, U. S.	1910-14=100	189	191	174	177	204	216	229
Ten principal high-protein feeds, terminal markets	1935-39=100	257	246	235	228	242	256	260
Four oilseed meals	1935-39=100	247	230	216	209	243	258	260
Tankage, meat scraps, and fish meal	1935-39=100	296	302	309	299	269	274	285
Gluten feed, brewers' dried grains, and distillers' dried grains	1935-39=100	254	252	225	226	198	216	227
Feed, prices paid by farmers, U. S.	1910-14=100	220	220	201	201	214	221	230

LIVESTOCK-FEED PRICE RATIOS 4/

	(January average)								
Hog-corn, Chicago 5/	1930-49 = 12.2	Bushel	15.0	13.8	11.9	12.0	11.5	11.2	12.0
Hog-corn, U. S. farm prices	1930-49 = 12.7	Bushel	17.0	15.7	13.1	13.1	13.0	12.2	13.0
Beef steer-corn, Chicago 6/	1930-49 = 14.9	Bushel	18.8	17.1	20.4	20.1	19.9	19.6	19.6
Butterfat-feed, U. S.	1930-49 = 24.4	Pound	22.9	22.8	24.3	23.9	22.2	21.7	22.6
Milk-feed, U. S.	1930-49 = 1.34	Pound	1.44	1.34	1.41	1.34	1.38	1.37	1.35
Egg-feed, U. S.	1940-49 = 12.8	Pound	14.6	13.0	12.0	9.3	12.6	15.4	11.0

Prices compiled from Chicago Journal of Commerce, Minneapolis Daily Market Record, Kansas City Grain Market Review, and reports of the Grain Branch, Production and Marketing Administration, and the Bureau of Agricultural Economics.

1/ Changed from prices of No. 3 oats, previously published in this table.

2/ 36 percent in November-January 1950-51, other months shown 34 percent.

3/ 44 percent in November-January 1950-51, other months shown 41 percent.

4/ Units of corn or other concentrate ration equal in value to 100 pounds of hog or beef-steer, one pound of butterfat or milk, or one dozen eggs.

5/ Based on packer and shipper purchases of barrows and gilts, and No. 3 Yellow corn. The ratios for the years 1930-37 in the average are based on all purchases of hogs, and No. 3 Yellow corn.

6/ Based on prices of beef-steers sold out of first hands for slaughter, and No. 3 Yellow corn.

THE FEED SITUATION

Approved by the Outlook and Situation Board, February 13, 1951

SUMMARY

Although total stocks of the four feed grains on January 1 were a record high for the date (nearly 102 million tons), they were only a little above January 1 stocks of the last 2 years. Stocks per animal unit to be fed during the current feeding year are a little below the peak levels of the last 2 years.

Domestic utilization of feed grains has been heavy during the past year or so, and is expected to continue heavy during the rest of the feeding year which began October 1, 1950. During January-June of this year, total domestic use of feed grains probably will be greater than it was in the same period of 1950. Exports are expected to continue large, particularly of corn and sorghum grain, and probably will be larger in January-June this year than last. Heavy utilization from the big January 1 stocks of feed grains is expected to reduce the carry-over by next October 1--probably to one-fourth less than the 31 million tons on hand last October 1. Most of this reduction is expected to be in corn stocks, which may be around one-third smaller on October 1, 1951 than the record carry-over of 860 million bushels a year earlier. Some reduction is expected in stocks owned by CCC, as well as in privately owned stocks of feed grains.

Domestic disappearance of corn, oats, and barley in July-December of 1950 was a little larger than in the same months of 1949, and 10 percent above the 1943-47 average for the period. During October-December domestic disappearance of the three grains was above average, but a little smaller than the heavy disappearance in the last quarter of 1949, when feeding of new crop corn started earlier in the fall. The lateness of the harvest of the 1950 corn crop at least partly accounted for the very heavy disappearance of old corn in July-September, and the smaller total disappearance during October-December than a year earlier.

Farm stocks of hay on January 1 were 5 percent larger than on January 1, 1950, and the largest in the 14 years of record in relation to the number of roughage-consuming animal units to be fed. Hay stocks were larger than a year earlier in most States in the northern half of the country. Stocks in most of the Southern States were near average, but smaller than the big stocks in those States last year. Total disappearance of hay during May-December 1950 was 8 percent larger than in that period of 1949.

The General Ceiling Price Regulation, as amended, exempts prices of feed grains and hay, which are below parity. Processor prices and distributor prices of these products in processed form, however, are frozen at the highest price in the base period, December 19 through January 25, 1951. Prices at the processor level may be adjusted upward to the extent that the prices paid for the raw material advance above the highest price paid during the base period, until it is determined that the prices of the raw material have reached the legal minimum. This provision of the regulation will affect prices of many of the byproduct feeds, which are processed from grains or other farm products, which are below the legal minimum for ceilings.

Prices of feed grains and many of the byproduct feeds averaged higher in January than in December, although feed prices showed some general weakness in the last half of the month. Based on average feed price relationships, prices of sorghum grains, fish meal, and distillers' dried grains were comparatively low in January, while cottonseed meal was relatively high.

Feed Statistics, Including Wheat and Rye, USDA Statistical Bulletin 95, December 1950, is available for distribution. This handbook of basic statistics on stocks, supplies, utilization, foreign trade, commercial movement, and prices of grains and feed will be mailed to those on the regular mailing list for the Feed Situation. Copies may be obtained on request from the Office of Information, Bureau of Agricultural Economics, Washington 25, D. C.

CURRENT SITUATION AND OUTLOOK

Large Stocks of Feed Grains on January 1; Heavy Utilization Expected to Reduce Carry-over

Total stocks of four feed grains--corn, oats, barley, sorghum grain--on January 1 totaled nearly 102 million tons, slightly larger than the big stocks of the past 2 years. Although January 1 stocks of sorghum grains have been estimated only since 1948, stocks on that date this year are larger than production in any earlier year, and are by far the largest on record. Domestic utilization of feed grains was substantially above average in the last half of 1950. Disappearance of feed grains is expected to continue heavy during the remainder of the 1950-51 feeding season, since there is a current strong demand for feed, and livestock production is expanding. This will result in a smaller carry-over of feed grains into 1951-52 than the 31 million tons on hand at the beginning of 1950-51--probably around one-fourth less--with practically all the reduction in corn.

Stocks of corn, oats, and barley on January 1, which have been estimated for a number of years, totaled close to 96 million tons, only slightly smaller than the record large stocks of these grains on January 1, 1950, and 36 percent above the 1938-42 average (table 2). Stocks of the 3 grains were also much larger than average in relation to the estimated number of grain-consuming animal units to be fed during the 1950-51 season, although they were a little smaller per animal unit than in either of the past 2 years. As compared with a year earlier, stocks of corn were about 5 percent smaller, while oats and barley stocks were somewhat larger.

Table 2.- Feed grains: January 1 stocks, total and per animal unit, average 1938-42, annual 1943-51

Year	January 1 stocks 1/						Grain-consuming animal units 3/	Stocks per animal unit 4/
	Corn	Oats	Barley	Total	Sorghum grains 2/	Total		
	Mil. tons	Mil. tons	Mil. tons	Mil. tons	Mil. tons	Mil. tons	Million	Ton
Average 1938-42	55.0	11.6	3.8	70.4	---		153.1	.46
1943	63.9	14.1	5.9	83.9	---		192.4	.44
1944	55.6	12.0	5.2	72.8	---		193.2	.38
1945	59.5	12.5	5.1	77.1	---		173.7	.44
1946	53.3	17.0	4.6	74.9	---		167.8	.45
1947	61.8	15.0	4.2	81.0	---		161.4	.50
1948	43.6	12.5	4.5	60.6	1.3	61.9	155.7	.39
1949	74.0	15.6	5.5	95.1	2.4	97.5	162.7	.58
1950	78.6	14.1	4.6	97.3	3.6	100.9	5/169	.58
1951 5/	74.6	15.5	5.8	95.9	5.8	101.7	173	.55

1/ Stocks in all positions, 1944 to date; farm, terminal market, and Government-owned stocks, 1938-43.
2/ January 1 stocks not reported prior to 1948.
3/ Grain-consuming animal units fed during feeding year beginning preceding October 1.
4/ Stocks of corn, oats, and barley per animal unit.
5/ Preliminary.

Stocks of corn in all positions were above average in practically all areas of the country, but were somewhat smaller than a year ago in Iowa, Minnesota, and the East North Central States. Total stocks of corn were much larger than the 1944-48 average in all the Corn Belt States, but in most of these States a large part of the increase was in off-farm stocks. In the North Atlantic and South Atlantic States, corn stocks were above the 1944-48 average and about as large as a year ago, while in the South Central Region they were 5 percent larger than a year earlier. Stocks of corn on farms, estimated at 2,160 million bushels, were 10 percent smaller than a year earlier, although well above average. Stocks of corn on farms were considerably smaller than a year ago in a number of the Corn Belt States. Off-farm stocks, a large part of which are owned by CCC, totaled 504 million bushels, 103 million bushels larger than a year earlier and the largest on record.

Stocks of oats and barley in all positions were above the 1944-48 average, and also larger than at the beginning of 1950. Total stocks of oats were about 10 percent larger than on January 1, 1950, and have been exceeded only in 1946 and 1949. Barley stocks on January 1 were the largest since 1943, and about one-fourth larger than a year earlier. Stocks of sorghum grains remaining from the 1950 record supply totaled 209 million bushels, 81 million bushels more than a year earlier, and by far the largest of record.

Table 3.- Corn: Stocks January 1, by States and regions, average 1944-48, annual 1949-51

Region	Average 1944-48			1949			1950			1951 [1]		
	Farm stocks	Off-farm stocks	Total stocks	Farm stocks	Off-farm stocks	Total stocks	Farm stocks	Off-farm stocks	Total stocks	Farm stocks	Off-farm stocks	Total stocks
	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.
N. Atl.	41.7	3.2	44.9	55.2	9.9	65.1	52.6	10.4	63.0	55.3	7.3	62.6
Ohio	107.7	2.6	110.3	153.8	4.6	158.4	139.3	10.7	150.0	125.0	10.2	135.2
Ind.	147.3	2.9	150.2	215.5	4.4	219.9	183.4	21.4	204.8	157.2	17.8	175.0
Ill.	292.6	12.4	305.0	421.1	22.1	443.2	389.0	88.7	477.7	317.7	110.0	427.7
Mich.	31.3	.7	32.0	43.5	---	43.5	59.0	1.1	60.1	44.6	1.1	45.7
Wis.	40.6	.6	41.2	42.7	4.9	47.6	57.5	3.1	60.6	43.5	4.8	48.3
E. N. C.	619.5	19.2	638.7	876.6	36.0	912.6	828.2	125.0	953.2	688.0	143.9	831.9
Minn.	122.2	3.8	126.0	177.4	8.3	185.7	181.4	39.8	221.2	129.0	37.9	166.9
Iowa	377.4	6.0	383.4	500.0	7.9	507.9	469.0	103.7	572.7	371.2	155.5	526.7
Mo.	93.2	4.9	98.1	148.2	7.5	155.7	128.3	16.0	144.3	128.9	19.4	148.3
N. Dak.	5.2	.2	5.4	8.2	.3	8.5	7.2	1.9	9.1	6.2	1.9	8.1
S. Dak.	64.7	1.5	66.2	88.5	1.1	89.6	60.4	26.9	87.3	67.1	29.0	96.1
Nebr.	165.2	6.1	171.3	191.2	4.3	195.5	195.0	46.4	241.4	211.6	69.0	280.6
Kans.	39.0	1.7	40.7	52.0	2.3	54.3	43.3	8.4	51.7	57.5	13.9	71.4
W. N. C.	866.9	24.2	891.1	1,165.5	31.7	1,197.2	1,084.6	243.1	1,327.7	971.5	326.6	1,298.1
Total N.C.	1,486.4	43.4	1,529.8	2,042.1	67.7	2,109.8	1,912.8	368.1	2,280.9	1,659.5	470.5	2,130.0
S. Atl.	142.3	2.2	144.5	164.9	5.3	170.2	175.0	6.4	181.4	173.9	7.9	181.8
S. Cent.	217.9	4.4	222.3	275.9	6.8	282.7	251.8	7.8	259.6	263.4	10.3	273.7
West.	12.0	1.9	13.9	9.8	2.2	12.0	13.6	5.3	18.9	8.4	5.3	13.7
Total U.S.	1,900.3	55.1	1,955.4	2,547.9	[2] 93.4	[2] 2,641.3	2,405.8	[2] 400.4	[2] 2,806.2	2,160.5	[2] 503.8	[2] 2,664.3

[1] Preliminary.

[2] The United States total includes 1.5 million bushels of off-farm stocks in 1949, 2.4 million bushels in 1950, and 2.5 million bushels in 1951, unallocated by States.

January 1 Stocks Include About 18 Million Tons of Feed Grains Under Price Support

The total quantity of feed grains held under loan or Government ownership on January 1 totaled 17.7 million tons, about 17 percent of the total stocks, and slightly more than on January 1 last year. This included only 2.8 million tons of 1950 grain placed under loan through December. This was considerably smaller than the 4.9 million tons of 1949 feed grains placed under loan in the same period of 1949. The CCC owned about 13.1 million tons, largely corn taken over from the 1948 and 1949 crops.

A summary of the quantities of feed grains held under price support is shown in table 4. Through December only about 18 million bushels of 1950 corn had been placed under loan, much less than the 98 million bushels of 1949 corn in the same period of 1949. Farmers placed only about one-half as much oats under loan during July-December 1950 as in the same period of 1949. Larger quantities of barley and sorghum grain, however, had been placed under price support from the big 1950 crops.

Table 4.- Feed grains: Total stocks and quantities under price support, January 1, 1950 and 1951 1/

Item	Corn		Oats		Barley		Sorghum grain	
	1950	1951	1950	1951	1950	1951	1950	1951
	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.
Under price support								
Old grain resealed	81	2/62	2	2	2	1	0	*
Placed under loan from new crop	98	18	28	14	26	29	39	49
Owned by CCC	305	399	14	12	28	28	9	38
Total	484	479	44	28	56	58	48	87
Not under price support 3/	2,322	2,185	837	941	137	185	80	122
Total stocks	2,806	2,664	881	969	193	243	128	209

1/ Based on reports of the Production and Marketing Administration on quantities placed under loan, resealed, and delivered to CCC through December 1950.
2/ Includes 41 million bushels of 1949 corn resealed and 21 million bushels of 1948 corn on which loans have been extended. 3/ Residual.
*Less than 500,000 bushels.

The Commodity Credit Corporation had on hand 399 million bushels of corn taken over from the 1948 and 1949 crops, which constituted the bulk of the corn stocks under price support. Through December farmers had resealed 41 million bushels of 1949 corn and extended their loans on about 21 million bushels of 1948 resealed corn.

Stocks of the other feed grains owned by CCC were small compared with the large corn stocks, but oats and barley stocks were nearly as large as last year and stocks of sorghum grains were larger. The 38 million bushels of sorghum grain remaining in Government ownership is largely from the 1949 crop, of which 76 million bushels were delivered to CCC under the price support program.

A substantially smaller total volume of feed grains is expected to be placed under price support from the 1950 crops than the 14.5 million tons in 1949-50. Sales of CCC-owned grain and redemptions of grain held under loan probably will be larger over the next few months than in the same period of 1950. This probably will result in a substantial reduction in stocks of feed grains held under price support by next summer and fall as compared with a year earlier.

Heavy Disappearance of Feed Grains in Prospect for the First Half of 1951

Domestic utilization of feed grains has been increasing during the past 2 or 3 years and has been unusually heavy, both in total and per animal unit, during the past year. In the last half of 1950 domestic disappearance of corn, oats, and barley was 10 percent above the 1943-47 average, and slightly higher than a year earlier. The total quantity of all grains and byproduct feeds fed to livestock in October-December was slightly below the heavy feeding in that quarter last year, but was a little greater than the 1943-47 average for the quarter. Livestock feeding is expected to continue heavy throughout the 1950-51 feeding year, in view of increased hog production and heavy grain feeding of cattle. Feeding of grain sorghum from the record 1950-51 supply probably will be much heavier during January-September this year than in that period of 1950.

Table 5.- Total concentrates fed to livestock, United States, by quarters, average 1943-47, annual 1946-50 1/

Year beginning October	October-December 2/	January-March	April-June	July-September	Total October-September
	Mil. tons	Mil. tons	Mil. tons	Mil. tons	Mil. tons
Average					
1943-47	46.0	34.6	22.5	24.3	127.4
1946	44.3	34.2	22.2	23.2	123.9
1947	41.1	30.0	19.9	21.2	112.2
1948	42.3	31.6	23.7	25.9	123.5
1949	48.3	32.9	24.6	27.3	133.1
1950	3/46.7				

1/ Total quantity of grains and byproduct feeds fed to livestock. For earlier years see Feed Situation, December 1950.
2/ Includes all corn in silage, part of which is consumed after January 1.
3/ Preliminary.

Table 6.- Corn, oats, and barley: Domestic disappearance, by quarters, United States, average 1943-47, annual 1946-50

Year beginning October	October-December 1/	January-March	April-June	July-September	Total October-September
	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels
			Corn		
Average 1943-47 ..	1,235	784	534	377	2,930
1946	1,212	813	577	407	3,009
1947	1,111	671	426	327	2,535
1948	1,147	741	538	444	2,870
1949	1,359	765	574	540	3,238
1950 2/	1,299				
			Oats		
Average 1943-47 ..	260	339	275	445	1,339
1946	271	363	286	445	1,365
1947	241	343	244	424	1,252
1948	277	366	308	482	1,433
1949	258	361	308	441	1,368
1950 2/	282				
			Barley		
Average 1943-47 ..	72	73	57	87	289
1946	62	59	48	74	243
1947	55	70	62	65	252
1948	64	63	59	80	266
1949	57	59	58	80	254
1950 2/	51				
			Total (million tons)		
Average 1943-47 ..	40.5	29.4	20.7	19.8	110.4
1946	39.7	30.0	21.9	20.3	111.9
1947	36.3	26.0	17.3	17.5	97.1
1948	38.1	28.1	21.4	22.1	109.7
1949	43.5	28.6	22.4	24.1	118.6
1950 2/	42.1				

1/ Includes all corn in silage, part of which is consumed after January 1.

2/ Preliminary.

During October-December the domestic disappearance of corn for all purposes, estimated at 1,299 million bushels, was 5 percent larger than the 1943-47 average for the quarter, but 4 percent smaller than the heavy disappearance in the corresponding period of 1949. This estimate of disappearance is based on the total corn supply and includes corn used for silage and forage, part of which would be consumed after January 1. Domestic disappearance of corn harvested as grain totaled 1,013 million bushels, about 82 million bushels less than in that quarter of 1949, but otherwise was the heaviest for the quarter since 1943. As least part of the apparent heavy feeding of corn in July-September and the reduction in feeding in October-December 1950, as compared with a year earlier, was the result of the lateness of the harvesting of the 1950 crop. All of the feeding from the new crop prior to January 1 is statistically accounted for in the October-December quarter. In 1950 the corn crop was harvested 2 to 4 weeks later than in 1949, which resulted in a comparatively heavy disappearance of old corn in July-September and a comparatively light disappearance in October-December. In the last half of 1950 domestic disappearance of corn for all purposes totaled 1,837 million bushels, slightly higher than a year earlier. Domestic disappearance of corn in January-June 1951 probably will be somewhat larger than in that period of 1950, but in July-September this year it probably will not exceed the record disappearance in that quarter of 1950.

Exports of corn in 1950-51 are expected to be at least as large as the 106 million bushels exported as grain in 1949-50. During October-December 28 million bushels were exported. Exports are expected to continue large during the next several months, as the United States is currently the principal source of corn for importing countries. Allowing for prospective domestic and export requirements for the remainder of the marketing year, the carry-over of corn next October 1 is expected to be around one-third less than the 860 million bushels carried over on October 1, 1950.

The October-December disappearance of oats, estimated at 282 million bushels, was 9 percent larger than a year earlier, while a little less barley was consumed domestically. During the first half of the oat marketing year (July-December), domestic utilization of oats was slightly smaller than a year earlier. Some increase in disappearance during January-June over a year earlier seems likely, but even so, the carry-over next July 1 probably will be somewhat larger than the 220 million bushels carried over on July 1, 1950. A heavier disappearance of barley also appears probable in the first half of 1951 than in that period of 1950. But with the big stocks of barley on hand, the carry-over next July probably will be larger than on July 1,1949.

Total disappearance of sorghum grain through December from the record 1950-51 supply was 88 million bushels, much larger than in the same period of 1949. Of this quantity, about 21 million bushels were exported during October-December, leaving 67 million bushels for domestic use, principally for feed. This was nearly double the domestic disappearance through December 1949.

Large Production of Byproduct Feeds in First Quarter of 1950-51 Feeding Year

Production of oilseed cake and meal in October-December was a little above the heavy output in the same period of 1949. The production of oilseed cakes and meals in the 1950-51 season is expected to be at least as large as

Table 7 .- Production and stocks of specified byproduct feeds, December 1950 with comparisons

Item	1949-50 Oct.-Sept.	1949 Oct.-Dec.	1950 October	1950 November	1950 December	1950 Total
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Production						
Cottonseed cake and meal	2,489.4	999.0	276.5	252.0	193.6	722.1
Soybean cake and meal	4,581.7	1,228.1	453.3	536.1	558.6	1,548.0
Linseed cake and meal	689.2	185.1	64.6	64.2	67.7	196.5
Peanut cake and meal	137.0	57.8	6.3	11.1	12.2	29.6
Copra cake and meal	135.9	42.9	15.6	12.1	10.9	38.6
Total	8,033.1	2,512.9	816.5	878.7	843.0	2,534.8
Corn gluten feed and meal	925.6	223.3	86.5	85.4	78.8	250.7
Brewers' dried grains	233.0	48.4	16.4	16.3	16.1	48.8
Distillers' dried grains	365.1	73.8	60.8	62.8	65.1	188.7
Wheat millfeeds	4,573.1	1,191.1	374.9	377.0	1/390.0	1/1,141.9
Rice millfeeds	213.7	79.2	32.2	21.1	15.2	68.5
Alfalfa meal	1,097.1	209.5	105.9	41.4	34.4	181.7
Fish cake and meal	212.0	58.9	30.1	15.3	17.0	62.4
Dry or powdered skim milk	10.2	1.7	.4	.3	.4	2.1
Tankage and meat scraps 2/	785.0	200.9	69.1	73.1	73.9	216.1
Stocks end of period						
Cottonseed cake and meal	153.5	142.8	214.2	207.9	190.9	---
Soybean cake and meal	35.2	47.4	41.2	54.6	72.3	---
Linseed cake and meal	55.8	14.8	60.9	51.3	40.6	---
Peanut cake and meal	2.6	6.2	3.2	4.8	7.1	---
Copra cake and meal	13.6	3.7	17.8	15.3	11.9	----
Total	260.7	214.9	337.3	333.9	322.8	---
Brewers' dried grains	5.7	3.6	4.2	4.1	3.7	---
Distillers' dried grains	15.6	2.6	42.6	53.9	57.9	---
Alfalfa meal	238.5	160.3	262.9	228.2	164.6	---

Compiled as follows: Wheat millfeeds, cottonseed, soybean, linseed, and copra cakes and meals, Bureau of the Census; gluten feed and meal, brewers' and distillers' dried grains, rice millfeeds, and alfalfa meal, Production and Marketing Administration; fish cake and meal from Fish and Wildlife Service, Department of the Interior.

1/ Preliminary.

2/ Reported production, which was estimated to be about 95 percent of the total United States production prior to April 1950, and 98 percent, April 1950 to date.

the 8,033,000 tons produced in 1949-50. In the first quarter of 1950-51, production totaled 2,535,000 tons, a little larger than a year earlier. The record production of soybean meal in that quarter more than offset reductions in output of the other oilseed meals. Exports of oilseed cake and meal during October-December totaled only 15,000 tons, much less than in that quarter of 1949. During the quarter 57,000 tons were imported, 18 percent more than a year earlier. Stocks of oilseed cake and meal on January 1 totaled 323,000 tons, 50 percent larger than a year earlier.

Total production of wheat millfeeds during October-December is estimated at 1,142,000 tons, a little smaller than a year earlier. Production of wheat millfeeds in 1950-51 probably will be no larger than the 4,573,000 tons produced in 1949-50. Imports are expected to be considerably smaller than the heavy import of 180,000 tons in 1949-50.

Production of gluten feed and meal during October-December 1950 was 12 percent larger than a year earlier, and it probably will total somewhat larger for the entire feeding season. Production of distillers' dried grains during the first quarter of 1950-51 totaled 189,000 tons, the largest for the quarter in the 16 years of record. Total production for the entire feeding year is expected to be the largest since the big production of 634,000 tons in 1944-45. Production of tankage, meat scraps, and fish meal in October-December was larger than in that quarter of 1949 and the largest for the quarter in recent years, while alfalfa meal and rice millfeed production was a little smaller.

Hay Stocks and Disappearance Large in Relation to Livestock Numbers

Stocks of hay remaining on farms January 1 totaled 72.7 million tons, 5 percent larger than a year ago and the largest since 1943. In relation to the estimated number of hay-consuming livestock to be fed during the 1950-51 feeding year, hay stocks are the largest in the 14 years of record and 13 percent above the 1941-45 average. January 1 stocks of hay were larger than a year earlier in most of the States in the northern half of the country and also in the Western region. They were much larger than a year ago in New York and in some important dairy areas of the North Central region, where shortages occurred last year. In most of the southern States, January 1 stocks were smaller than the big stocks in those States last year, but were near or above average.

The total disappearance of 49.0 million tons of hay during May-December 1950 was 8 percent larger than in the same period of 1949, and above the average for the past 10 years. Fall pastures were better than usual in most areas of the country except in the Southwest. Dry pastures in the Southwest, the fall snow storms in the Midwest and East, and poor quality of hay in some areas all contributed to heavy disappearance of hay through December. Disappearance was above average and somewhat larger than in the same period of 1949 in the North Central and South Central regions.

Table 8.- Hay: Supply, May-December disappearance, and stocks January 1, average 1941-45, annual 1946-50

Year beginning May	Hay supply May 1 1/	May-December disappearance	Stocks on farms January 1 following	Roughage-consuming animal units fed annually 2/	May-December disappearance per animal unit	January 1 stocks per animal unit
	1,000 tons	1,000 tons	1,000 tons	Thousand	Ton	Ton
Average 1941-45	118,453	46,860	71,593	77,488	.60	.92
1946	121,346	51,671	69,675	72,822	.71	.96
1947	118,739	48,962	69,777	69,420	.71	1.01
1948	114,599	47,403	67,196	68,162	.70	.99
1949	114,634	45,300	69,334	68,678	.66	1.01
1950	121,727	49,039	72,688	3/71,000	3/.69	3/1.02

1/ Production plus farm stocks on May 1.
2/ Weight for roughage-consuming animal units fed annually shown in table 10, October 1950 Feed Situation.
3/ Preliminary estimate.

Table 9.- Hay: May-December disappearance and stocks on farms January 1 following, by regions, average 1944-48, 1949 and 1950

Region	May-December disappearance			January 1 stocks		
	Average 1944-48	1949	1950 1/	Average 1945-49	1950	1951 1/
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
North Atlantic	6,921	6,272	6,052	9,459	8,030	9,244
East North Central	9,622	8,770	10,037	14,542	13,666	15,134
West North Central	12,636	11,123	13,040	21,676	22,325	23,523
South Atlantic	2,800	3,084	3,101	4,175	4,561	3,953
South Central	5,662	5,543	6,194	7,682	8,395	7,700
Western	11,294	10,508	10,615	12,670	12,357	13,134
Total	48,935	45,300	49,039	70,204	69,334	72,688

1/ Preliminary.

Feed Prices Decline in Last Half of January; Prices of Feed Grains and Hay Below Minimum Ceilings Levels

After advancing during the last quarter of 1950, the wholesale price of corn and a number of other feeds declined in the last half of January from high points reached early in the month. The declines were relatively small for most feeds, however, and prices of the grains and most of the byproduct feeds averaged higher in January than in December. Prices of feed grains, wheat millfeeds, and hominy feed were substantially higher than in January 1950, while there was relatively less increase in most of the oilseed meals, tankage, and meat scraps. Although prices of fish meal and distillers' grains advanced from the middle of December through January, average prices of these feeds in January remained somewhat lower than a year earlier.

The price of No. 3 Yellow corn at Chicago averaged $1.74 per bushel during January, 45 cents per bushel higher than a year earlier and not much below the CCC sales price of $1.79 per bushel for the month. Oats, barley, and sorghum grains were all somewhat higher than a year earlier, but increases in prices of these grains were not so great as for corn. Prices of all feed grains in January were above the 1950 supports. The index of prices received by farmers for feed grains advanced 6 percent from mid-December to mid-January, and was 29 percent higher than a year earlier. High-protein feed prices were 14 percent higher than in January 1950, while wheat millfeeds were nearly one-fourth higher.

Table 10. - Prices received by farmers for feed grains and hay and legal minimum prices, United States, January 15, 1951 1/

Commodity	Unit	Average prices January 15	Legal minimum prices January 15 2/
		Dollars	Dollars
Corn	Bushel	1.54	1.71
Oats	Bushel	.882	.954
Barley	Bushel	1.27	1.48
Sorghums for grain	Cwt.	2.10	2.90
Hay, all, baled	Ton	22.60	23.30

1/ Taken from Parity and Average Prices Received by Farmers for Agricultural Commodities - January 1951. Supplement to Agricultural Prices, Bureau of Agricultural Economics, January 1951.
2/ Same as the parity price for feed grains and hay.

The General Price Regulation, as amended, exempts prices of feed grains and hay in unprocessed form, since in January prices of these commodities were all below parity, the legal minimum level at which ceilings can be established on the commodities. Processor prices and distributor prices of commodities in processed form, however, are frozen at the highest level in the base period, December 19 through January 25. Processor ceilings however, may be adjusted upward to the extent that their raw material costs advance above their costs during the base period, until it is determined that affects prices of many of the byproduct feeds which are processed from grains, and other farm products which are below the legal minimum for ceilings. This provision, however, does not apply to all the byproduct feeds, since the raw materials from which some are derived have reached the legal minimum. Important feeds among this group are: cottonseed meal, tankage, and meat scraps. The ceiling price on soybean meal has been established at $74.00 per ton, bulk, in carload lots at Decatur. This ceiling price may be adjusted by the differentials established during the base period for quality, handling costs, location, etc.

As shown in table 10, prices of the four feed grains and hay were below the legal minimum levels at which ceilings could be established on these commodities. Reflecting the record large supply this year, the price of sorghum grains was lower relative to the legal minimum than the other feed grains, while the price of oats had advanced to within 7 cents of the January 15 legal minimum. The legal minimum prices of these feeds will be subject to further change, since parity prices, on which they are based, change with monthly changes in the index of prices paid by farmers.

February Sales Prices of CCC Feed Grains

The CCC announced on February 1 sales prices and approximate quantities of corn, oats, and barley available to domestic buyers. Domestic sales prices announced for these three grains for February are set at the market price, but not below the minimum prices specified in the announcement. Prices at two representative markets and the total quantities offered for sale are shown in table 11. The February sales price at points of production also are set at the market price, but not less than the applicable 1950 loan rate, plus 19 cents per bushel for corn in the commercial area, 14 cents for oats, and 22 cents for barley, if received by truck, and 18 cents if received by rail or barge.

Table 11. - Domestic sales prices of corn, oats, and barley, and quantities offered for sale by CCC, February 1951

Grain	Approximate quantity available	Minimum domestic sales prices 1/	
		Chicago	Minneapolis
	Million bushels	Dollars per bushel	Dollars per bushel
Corn, No. 3 Yellow	50	1.81	1.74
Oats, No. 3 or better	11	.97	.93
Barley, No. 1	22	---	2/ 1.50

1/ The sales price is the market price, but not less than the minimum announced price, basis in store. 2/ Received by rail or barge.

The quantities of feed grains sold by CCC to domestic buyers have increased in recent months, as the market prices have advanced to the CCC sales prices in many areas. During October-December 1950 the CCC sold about 20 million bushels of corn, 1 million bushels of oats, and 6 million bushels of barley. These are total sales to domestic buyers and for export, and include sales other than those made through the announced program. Sales of sorghum grain in the last quarter of 1950 totaled about 16 million bushels, largely for export.

No Acreage Allotments for 1951 Corn

The Secretary of Agriculture announced early in January that there will be no acreage allotment on the 1951 corn crop. This action was taken in view of increases in corn requirements and the need for maximum production of feed grains in the present national emergency.

In making the announcement, the Secretary stated that "through having no allotments on the 1951 crop, we hope that farmers will make a substantial increase in their 1951 corn production, even to the extent of rebuilding reserves of corn for future years above the carry-over level indicated for next October."

This action relieves all farmers from compliance with allotments as a condition for price support on the 1951 crop. With no allotments in effect for corn, it is not necessary to establish a commercial corn area this year.

Acreage Guides Announced for Feed Grains for 1951

Acreage guides for 1951 were announced by the Secretary of Agriculture on February 2 for feed grains and a number of other crops. These guides will assist farmers in planning their 1951 production program. The Secretary stated in this announcement that "the production guides are designed to help farmers plan their crops in line with the over-all need -- turning out the highest possible balanced production this year, and at the same time protecting their resources for the future."

Table 12.- Acreage guides for 1951 feed grains and related crops, with comparisons

Commodity	Planted acreage			1951 acreage guides		
	1939-48	1949	1950	Acreage	Percentage of 1939-48	Percentage of 1950
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	Percent	Percent
Corn	89,825	88,192	84,370	90,000	100.2	106.7
Oats	42,891	44,387	46,642	43,500	101.4	93.3
Barley	14,713	11,188	13,235	13,235	90.0	100.0
Sorghums for grain 1/	6,552	6,612	10,361	7,150	109.1	69.0
Wheat (spring seeded only)	18,072	22,649	18,509	21,400	118.4	115.6
Soybeans for beans 1/	8,764	10,156	13,291	13,000	148.3	97.8
Cotton 2/	21,859	27,719	18,654	28,535	130.5	153.0
Flaxseed	3,869	5,226	4,064	4,000	103.4	98.4

1/ Harvested acreages.
2/ Total Upland and American Egyptian in cultivation on July 1.

In view of increasing feed grain requirements, the corn acreage guide was set at 90 million acres, an increase of 7 percent over the planted acreage in 1950. This would be about the same as the 1939-48 average, but a little higher than in most years since World War II. A larger total acreage of corn and other feed grains than called for by the guides would be desirable, if it were not necessary to consider the need for other crops. The suggested acreages of oats and sorghum grains are reduced from the 1950 levels, to allow for increases in the acreages of corn, cotton, and wheat.

The guides suggest a marked increase in cotton acreage over 1950, and about the same acreages of soybeans and flaxseed. This would give a larger total acreage of these three crops, which are basic to oilseed cake and meal production, than in 1950.

ANALYSIS OF CURRENT FEED PRICE RELATIONSHIPS

The relation between the prices of various feeds changes from year to year with changes in the supply position and in the demand for the individual feeds. Longer-term changes in feed price relationships also may occur with changing practices of livestock feeding, trends in numbers of different types of livestock, and changes in the relative supplies of the various feeds. In this section, average prices of various feed concentrates for January 1951 are compared with the calendar year averages for 1947-50. Longer-term comparisons also are shown, based on the historic relationships between the price of corn and lower-protein feeds and the price of soybean meal and the high-protein feeds. The price comparisons made are based on average prices received by farmers for feed grains, cost to farmers of poultry and dairy feeds, and wholesale prices of byproduct feeds at principal markets. While these comparisons indicate the relative levels of the various feed prices in January, on the basis of the two methods of comparison, they do not necessarily indicate their relative cheapness as feeds for various types of livestock, nor do the indicated relationships apply to all areas of the country.

Feed Prices in January as Compared With Prices in the Past Four Years

During the past four years feed prices have fluctuated greatly under the influence of marked changes in supplies and more moderate, but substantial, changes in demand. Short feed grain supplies in 1947-48 were accompanied by marked increases in the prices of most feed, particularly the feed grains, which reached a record high early in 1948. Feed grain prices declined sharply in the last half of 1948, when a record crop of feed grains was harvested. Prices of the feed grains were much lower in 1948-49 and 1949-50 than in 1947-48, and were low relative to the high-protein feeds. The high-protein feeds were in strong demand in 1949. Prices of animal protein feeds and soybean meal reached record levels in the summer of that year, then declined one-third below that level by the middle of 1950. While this four-year period following World War II has been one of considerable instability in feed prices, it does offer the advantage of permitting comparisons with average prices that are close to the current levels. The current level of feed prices is more than double the level just before World War II.

Table 13.- Prices of specified feeds, January 1951 with comparisons

Feed	Unit	Average of 1947-50 calendar years	January 1949	January 1950	January 1951	Feed prices computed from historic relationships: Based on corn 1/	Feed prices computed from historic relationships: Based on soybean meal 2/
		Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Grains 3/							
Corn, U. S. average	Bu.	1.56	1.25	1.15	1.54	1/1.54	
Oats, U. S. average	Bu.	.828	.762	.705	.882	.78	
Barley, U. S. average	Bu.	1.31	1.15	1.10	1.27	1.24	
Sorghum grain, U. S. average	Cwt.	2.37	2.22	1.89	2.10	2.35	
Byproduct feeds (bagged)							
Bran, standard, Minneapolis	Ton	51.70	51.00	40.70	50.00	48.20	
Middlings, standard, Minneapolis	Ton	55.35	49.40	40.40	50.10	52.10	
Hominy, white, Chicago	Ton	61.15	50.45	46.80	61.90	60.00	
Brewers' dried grains, Milwaukee	Ton	55.00	65.90	53.70	52.80	51.60	54.50
Distillers' dried grains, Cincinnati	Ton	68.70	73.75	68.20	61.00	62.95	67.30
Gluten feed, 23 percent, Chicago	Ton	59.20	58.25	52.50	55.00	56.50	58.05
Soybean meal, 44 percent, Chicago 4/	Ton	80.10	73.45	66.00	77.20		2/77.20
Cottonseed meal, 41 percent, Memphis	Ton	71.30	64.40	59.00	80.35		67.65
Linseed meal, 36 percent, Minneapolis 5/	Ton	73.40	83.40	69.30	69.60		71.00
Peanut meal, 45 percent, S. E. milling points	Ton	71.85	69.25	63.35	69.80		68.15
Tankage, 60 percent, Chicago	Ton	117.80	125.50	117.00	124.50		110.25
Meat scraps, Chicago	Ton	111.35	111.50	105.00	119.55		103.85
Fish meal, 67 percent, San Francisco	Ton	166.20	170.00	179.90	144.70		158.45
Dairy and poultry ration							
Ration fed to milk cows on farms where milk is sold	Cwt.	3.16	3.37	3.04	3.46	3.24	
Ration fed to milk cows where cream is sold	Cwt.	3.09	2.88	2.62	3.11	2.88	
Average ration fed to poultry	Cwt.	3.88	3.62	3.38	3.89	3.83	
Laying mash	Cwt.	4.76	4.59	4.39	4.82	4.40	
Scratch feed	Cwt.	4.37	4.12	3.72	4.29	4.05	
Index of prices paid for feed (1910-14=100)	Pct.	229	220	201	230		

1/ Prices of specified feeds comparable to corn at $1.54 cents per bushel, the average price received by farmers on January 15. Computed on the basis of the average relationship between the prices of corn and the various feeds during 1926-49, omitting the years 1943-1946, when price ceilings were in effect. For method see the Feed Situation, January-February 1950.

2/ Prices of higher-protein feeds comparable to the average price of soybean meal, $77.20 per ton at Chicago, in January. Based on the relationship between prices of soybean meal and the various feeds in the years 1930-49, omitting 1943-46. See table 14.

3/ Average prices received by farmers.

4/ 44 percent protein, July 1950 to date. Prior to July 1950, 41 percent protein.

5/ 36 percent protein, July 1950 to date. Prior to July 1950 the protein percentage varied from 32 to 37 percent.

During the past year prices of most feeds have advanced considerably from postwar lows reached late in 1949 or early in 1950. In general, feed prices are back up to about the average of the postwar period, as is shown in table 13. The price of sorghum grains, reflecting the record supply this year, is low relative to the other feed grains. Prices of wheat millfeeds and hominy feed, important lower-protein byproduct feeds, were near average, although wheat millfeeds, particularly wheat middlings, are relatively lower than hominy feed, corn, or oats.

Prices of the high-protein feeds in January were generally lower than the average of the past four years. The price of cottonseed meal, which is in relatively short supply this year, is a major exception. Cottonseed meal prices in January were about one-third higher in January 1950, and 13 percent above the 4-year average. The price of fish meal, on the other hand, has declined considerably from the record high level reached in 1949, and in January 1951 it was well below the 4-year average. Prices of distillers' dried grains and gluten feed and meal, the production of which has been at a high level in recent months, were around 10 percent below the average. Prices of brewers' dried grains, linseed meal, and peanut meal were slightly below average, while tankage and meat scraps prices were a little above. Prices paid by farmers for poultry and dairy feeds and the index of prices paid by farmers for all feeds were fairly close to the postwar average.

Price Comparisons Based on Historic Relationships of Various Feeds to Corn and Soybean Meal

Price comparisons also may be made on the basis of historic relationships between one feed and various other feeds. In the January-February 1950 issue of the Feed Situation, corn was taken as a basic feed and simple linear relationships were computed between average prices received by farmers for corn and prices of a number of other commonly used feeds, by calendar years, during the period 1926-49. The results of this study revealed a rather close association between the price of corn and prices of feed grains and the lower-protein byproduct feeds, but less association between the price of corn and the high-protein feeds. Based on the relationships developed in that study, and using the January 15 price of corn, $1.54 per bushel, prices of the other feed grains and the grain byproduct feeds are computed and shown in table 13. The correlation between prices of corn and brewers' and distillers' dried grains, which were not previously computed, have been added to the list here.

These computed prices are what these other feeds would sell for, based on the 20-year relationships, when the price of corn was $1.54 per bushel. Based on these longer-term relationships to corn, the actual price of oats was 10 cents per bushel higher than the computed price, while sorghum grains were 25 cents per 100 pounds lower. Prices of the grain byproducts were fairly close to the computed prices.

Since prices of the high-protein feeds and corn were not so closely associated, computations have been made to determine the relationship of prices of high-protein feeds and soybean meal. The relationships between the price of soybean meal and 9 other important protein feeds were developed by simple regression analyses in the same manner as those for corn and the

Table 14.- Relationships between the prices of soybean meal and prices of other high-protein feeds 1/

Feed	Period covered 2/	Values in regression equation 3/		Coefficient of determination 4/
		a	b	
Cottonseed meal, 41 percent, Memphis	1930-49	- 3.77	.925	.967
Linseed meal, 36 percent, Minneapolis	1930-49	7.84	.818	.945
Peanut meal, 45 percent, S. E. milling points	1930-49	- 1.50	.902	.981
Tankage, 60 percent, Chicago	1930-49	2.93	1.39	.900
Meat scraps, Chicago	1935-49	15.08	1.15	.927
Fish meal, 67 percent, San Francisco	1935-49	-26.84	2.40	.888
Gluten feed, 23 percent, Chicago	1930-49	- 1.57	.772	.976
Brewers' dried grains, Milwaukee	1933-49	- 1.38	.724	.980
Distillers' dried grains, Cincinnati	1935-49	2.05	.845	.992

1/ The results shown are based on a simple correlation between the calendar year average prices of soybean meal at Chicago and prices of the various feeds at the specified markets.

2/ The years 1943-46, when maximum price regulations were in effect, were excluded from the analysis.

3/ Values in regression equation $X_1 = a + bX_2$. X_1 = price of specified feed and X_2 = price of soybean meal. Example: price of cottonseed meal = -3.77 + (.925 . 77.20) = 67.64.

4/ Coefficient of correlation squared. The coefficients indicate the closeness of the association between soybean meal prices and prices of the other feeds. A coefficient of 1.00 indicates perfect correlation, while 0 indicates no correlation. The coefficients of determination, computed on the basis of the association of the year to year changes in the prices of soybean meal and the other high-protein feeds, follow. Soybean meal as associated with: cottonseed meal .80; linseed meal .58; peanut meal .86; gluten feed .79; distillers' dried grains .94; brewers' dried grains .86; tankage .42; meat scraps .07; fish meal .12.

lower-protein feeds. 1/ A close association during the period 1930-49, omitting 1943-46, was found between soybean meal and most of the other high-protein feeds. There was less association between the prices of soybean meal and tankage, meat scraps, and fish meal than between soybean meal and the other high-protein feeds, as shown in table 14.

Two important factors contributing to the general association between the price of soybean meal and the other high-protein feeds are: (1) competition between these feeds in the market and (2) changes in demand which have a common effect on prices of all the feeds. The competition between feeds has a tendency to give a higher degree of association between feeds that can be more readily substituted in livestock rations, than between feeds which are less similar in composition. The broad swings in national demand and the accompanying wide range of prices in the selected years contributed to the high coefficients of determination obtained for some of the feeds.

These broad changes in demand appear to be the major factor in the association between the price of soybean meal, and the prices of tankage, meat scraps, and fish meal. When the year to year changes in the price of soybean meal are correlated with the year to year changes in these three feeds, the degree of association is much lower. See footnote 4, table 14. This type of comparison materially reduces the influence of wide changes in demand over a period of years. The association between the changes in the price of soybean meal and the other high-protein feeds remained fairly high, although it was lower than the association between the actual prices.

The January price of cottonseed meal was nearly $13.00 per ton higher than the computed price based on this relationship, a little greater difference than is indicated by the 4-year average comparison. Prices of tankage and meat scraps are moderately higher than the computed prices, while fish meal is somewhat lower. Prices of gluten feed, brewers' dried grains, and distillers' dried grains, which have lower-protein content than the other high-protein feeds, are computed both on the basis of the price of corn and of soybean meal. The January prices of these feeds are a little lower than the computed prices based on soybean meal, but are close to the computed prices based on corn prices.

Prices of corn and soybean meal are compared with prices of the various other feeds, based on calendar year averages, and therefore do not allow for differences in the seasonal variation of the various feeds during the year. This factor should not be overlooked in considering the January comparisons, although its importance is reduced when the feeds are divided into 2 major groups (1) the lower-protein feeds and (2) the high-protein feeds. The price of corn is ordinarily relatively lower than oats and barley in January, since the marketing year for corn starts about 3 months later. The unseasonal rise in corn prices since last October, however, probably has reduced the seasonal difference in prices of these grains for January this year as compared with average. The seasonal patterns in prices of the byproduct feeds are less regular and generally less pronounced than for the grains. The fact that most of the high-protein feeds have similar seasonal patterns reduces the need for seasonal adjustment between these feeds.

1/ A more detailed discussion of the method of computing the correlation and degree of association between corn and the other feeds is given on pages 15 to 19, Feed Situation, January-February 1950.

Table 15.- Feed grains: Stocks by quarters, United States, 1949-511 1/

Year	January 1	April 1	July 1	October 1
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
		CORN		
1949	2,641,330	1,854,717	1,292,755	825,306
1950	2,806,229	2,016,522	1,422,757	860,470
1951	2,664,290			
		OATS		
1949	974,544	607,254	295,198	1,135,127
1950	880,988	526,054	219,949	1,246,516
1951	969,015			
		BARLEY		
1949	230,845	161,964	100,979	249,967
1950	192,895	134,479	80,403	301,866
1951	243,197			
		SORGHUM GRAINS		
1949	85,294	2/	2/	18,553
1950	127,567	2/	2/	59,453
1951	208,824	2/	2/	

1/ Stocks in all positions, including stocks on farms, at terminal markets, interior mills, elevators, and warehouses, and Government-owned. 2/ Total stocks not reported.

Table 16.- Feed grains: Distribution of January 1 stocks, United States, average 1944-48, annual 1949-51

Year	Farm	Terminal market	Government-owned 1/	Interior mill, elevator, and warehouse	Total
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
			CORN		
Average 1944-48	1,900,346	15,047	248	39,799	1,955,440
1949	2,547,912	50,330	---	43,088	2,641,330
1950	2,405,778	51,688	248,154	100,609	2,806,229
1951	2,160,548	59,365	315,820	128,557	2,664,290
			OATS		
Average 1944-48	807,905	20,153	---	34,815	862,873
1949	928,377	11,434	---	34,733	974,544
1950	824,510	19,029	---	37,449	880,988
1951	907,660	17,698	136	43,521	969,015
			BARLEY		
Average 1944-48	128,100	23,900	---	45,114	197,114
1949	156,357	16,457	---	58,031	230,845
1950	106,494	33,778	2,441	50,182	192,895
1951	139,338	32,625	3,618	67,616	243,197
			SORGHUM GRAINS		
1948	29,097	8,605	---	8,181	45,883
1949	52,059	15,367	---	17,868	85,294
1950	59,967	18,567	---	49,033	127,567
1951	78,725	24,367	3,264	102,468	208,824

1/ In bins or other storage owned or controlled by CCC.

Table 17.- Feed grains: Receipts at primary markets, January, average 1945-49 and 1950, October 1950-January 1951

Item	January		1950-51			
	Average 1945-49	1950	October	November	December	January
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Corn, 12 markets 1/	38,599	25,182	24,340	51,873	42,716	54,949
Oats, 12 markets 1/	12,266	6,989	8,976	7,211	7,370	6,811
Barley, 4 markets 2/	8,173	4,351	13,503	12,581	9,821	3/8,200

1/ Chicago, Milwaukee, Minneapolis, Duluth, St. Louis, Kansas City, Peoria, Omaha, Indianapolis, Sioux City, St. Joseph, and Wichita.

2/ Minneapolis, Milwaukee, Chicago, and Duluth.

3/ Preliminary.

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